REMARKS FOR ADMINISTRATOR BOLDEN

CITIZENS FOR SPACE EXPLORATION

May 19, 2015

Thank you so much for inviting me this evening. Welcome to Washington! Your visit is quite timely as the House of Representatives takes up consideration of NASA's budget tomorrow.

NASA is fortunate to have strong bi-partisan support for our *Journey to Mars* and all of our work in aeronautics and education, but there is still debate this year, especially about funding for Earth Science, commercial crew and space technology. Everything NASA does is built on a strategic plan that ultimately derives from the Space Act by which we were founded in 1958, so it's all-important. We can never do everything we want, but our priorities are critical.

I know that almost half of you here today are university students and I applaud your interest in NASA and the science, technology, engineering and mathematics that are making our nation's leadership in space possible. I think maybe the perception out there that we closed our doors with the retirement of the space shuttle is beginning to fade, but it's always important to keep telling the story – to our friends, neighbors, co-workers and of course our elected officials.

Because, as I said, we are on a *Journey to Mars*. It's already begun and it's a journey that's going to define this generation.

There's great value in reminding our neighbors here on the Hill and really around the nation that landing astronauts on the Red Planet isn't just a pipe dream or merely something you see in the movies or read about in comic books. It's the culmination of years of planning and work and discovery and dreaming and – yes – at times discussion and debate.

But we've had the debate about our *Journey to Mars*; we've begun implementing it and now is not the time to cut back on any part of our plan nor on the study of our own planet.

NASA is reaching milestones on the *Journey to Mars* today. It's real. It's attainable and it matters to humanity and the pursuit of human progress.

The human journey to deep space begins in low Earth-orbit aboard the International Space Station (ISS).

Right now, for instance, an international crew of six aboard the ISS is doing research, demonstrating technologies and serving as guinea pigs themselves to help us learn what it will take to live and work in space for the long term. Human beings have now lived continuously in space aboard the ISS for 14 and a half years! That's an incredible achievement, certainly one of humanity's greatest.

Scott Kelly right now is on an historic mission aboard the ISS, becoming the first American astronaut who will live and work in space for an entire year. It's an important stepping-stone on our journey to Mars.

Scott joins a team of dedicated American astronauts and international crewmembers who, aboard the ISS, are helping us learn how to safely execute extended missions deeper into space. The human research will help us prepare for long-duration crews, while other experiments help us better understand things like how much living space a crew needs for a long-duration mission.

We're committed to the station through at least 2024, but we need to fully hand off low-Earth orbit transportation to the private sector. We must restore our ability to again launch Americans from the United States on the systems built by American companies and we have a plan to do just that. However, that plan could be in jeopardy.

The budget the House Appropriations committee is set to take up this week recommends funding for NASA consistent with the topline of the President's request--$18.529 billion—for which I am very grateful--but the proposed House bill cuts the funding needed to execute the contracts we have with Boeing and SpaceX to transport our astronauts to the space station in 2017 and end our sole reliance on the Russians.

But while this funding fight takes place in Washington, our commercial space partners continue to make great progress.

SpaceX recently tested a safety system of its crewed Dragon spacecraft. A successful pad abort test on May 6 at Cape Canaveral proved the capability to jettison the spacecraft from the rocket to safety in the Atlantic Ocean should there be a life-threatening situation on the launch pad. A second test later this year will demonstrate the abort capability of *Dragon* while in-flight attached to its *Falcon-9* launch vehicle.

Boeing also has demonstrated a new armored vehicle designed to transport astronauts away from a launch pad in an emergency.

Two international docking adapters for commercial vehicles will be on their way to the station on SpaceX's next commercial cargo mission and spacewalks have already taken place to clear the way for their installation on the Station.

As you know, we already have two partners with the capability to deliver cargo to the ISS. Orbital Sciences has suffered some setbacks, but they're set to return on an Atlas-V rocket later this year. No one ever said what we do was easy, but we learn from each problem and come back stronger.

I think all of you know that technology drives exploration, but once again, the House seeks to take funding from critical technology development that will help America continue to lead the world in exploration.

Let me repeat, at a time when technological competitiveness is at the forefront of our nation's ability to succeed in the world economy, when it is essential to our *Journey to Mars*, the current House bill underfunds the critical space technologies that the nation will need to continue to lead in space.

Still, I'm looking forward to this summer and the next flight of NASA's "flying saucer," the Low Density Supersonic Decelerator, which performed so well in a test flight off Hawaii last year. This key technology will help us land payloads on other planetary bodies.

Speaking of other planetary bodies, how many of you have been following *New Horizons* as it closes in on the Pluto system? We're very excited about this first mission to the planet/dwarf planet – what you call it depends how old you are!

I used to see it in maps of the solar system in my classroom as the farthest planet and it has drawn humanity's interest for a long time as it circles at an extreme distance from the sun.

But now, in July, after a nine-year journey, it will become the final planet in the solar system by which we have flown or visited. In some capacity we'll have been to all of them! You can already see some of the pictures *New Horizons* has taken of Pluto and its moons and they're incredible. You can bet we're going to be studying *New Horizons'* data for years, and that's something else for you to consider as you plan your path – the long-term missions that can literally define a career.

We're planning a mission to Jupiter's moon Europa, which might possibly have a lot of water and conditions suitable for life – and will soon announce the science instruments we've selected for that first mission.

That is, of course, just an early step and the mission will require many years of development, not to mention spacecraft travel, before we reach Europa, but that necessity for long term planning can draw dedicated people who are willing to commit many years of hard work to a goal like reaching another planet -- or its fascinating moon. I think anyone who has done one of these missions, like the team guiding the *Curiosity* rover across the surface of Mars right now, would tell you it's worth it.

Of course, the most important planet is the one on which we live and I'm extremely proud of the amazing fleet of Earth observing satellites that NASA operates, sometimes in partnership with other nations or other U.S. government agencies. This past year, we launched five new missions! Two of them (*RapidScat* and *CATS*) were instruments to the ISS, which are helping enhance the station's use as a platform for Earth observation.

I believe climate change is one of the biggest challenges facing our planet today and we have to keep our Earth science program firing on all cylinders. Our data is crucial to helping understand our planet's processes and its changes, but is also essential for helping us predict and respond to disaster and understand many other aspects of our living planet's processes.

Yet, the draft House Appropriations Bill seeks to severely curtail our Earth science program and threatens to set back generation's worth of progress in better understanding our changing climate and our ability to prepare for and respond to earthquakes, droughts and storm events.

I hope this discussion of Earth Science is just a bump in the road.

But at least we can all agree to keep funding the technologies to make air travel safer, greener and more efficient!

I hope you know that NASA is always with you when you fly, with technologies in virtually every aircraft and air traffic control tower. So on your travels back home, we'll be with you!

You know, the political battles over NASA have always ended with America continuing to lead the world in exploration and that will continue to be the case. I am incredibly optimistic about our future and you should be, too.

The young people here -- you are the space generation.

This week I'll deliver my fifth university commencement of the season and I firmly believe that sitting in those audiences are people who will be involved in our massive effort to put boots on Mars.

Whether they're the astronauts themselves or engineers or scientists involved in developing the technology or helping us learn more about the Martian environment or studying data, or even telling the story of what is perhaps the greatest human journey of all time, it is your generation – you who are university students now – who will do it.

My generation will get the ball rolling, we'll start the technology development, we'll get the *Orion* crew module and its Space Launch System rocket through their paces so they're ready to go farther, but it's you who are going to take that next giant leap and make it your own. You're going to Mars!

So take the passion that brought you here tonight and continue to nurture it. You're already translating it into action and I can't tell you how important that is.

We need many more people like you communicating with their communities and their elected leaders how important space is to them. We need you to stick with us on this incredible journey on which we are currently embarked for the benefit of all humanity.

Thank you, and now let me hear some questions from you.